

Bellwork: 10/1/12

Write the equation of a line given the  
 $(\overset{x_1}{6}, \overset{y_1}{-9})$  &  $(\overset{x_2}{11}, \overset{y_2}{1})$ .  $y - y_1 = m(x - x_1)$

$$m = \frac{1 - -9}{11 - 6} = \frac{10}{5} = 2$$

$$y - 1 = 2(x - 11)$$

$$y - 1 = 2x - 22$$

$$\boxed{y = 2x - 21}$$

#20  
packet

$$\begin{array}{r} -18x - 54y = 36 \\ +18x \qquad \qquad +18x \\ \hline -54y = 18x + 36 \\ \frac{-54}{-54} \quad \frac{-54}{-54} \quad \frac{-54}{-54} \\ y = -\frac{1}{3}x - \frac{2}{3} \end{array}$$

#19  
packet

$$\begin{array}{r} 35x + 15y = 45 \\ - 35x \phantom{+ 15y} \\ \hline 15y = -35x + 45 \\ \hline 15 \phantom{y} \quad 15 \quad 15 \end{array}$$

$$y = -\frac{7}{3}x + 3$$

## SLOPE

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

## POINT-SLOPE

$$y - y_1 = m(x - x_1)$$

Homework: 10/1/12

handout: Writing  
equation of a line

